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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,233	10/14/2005	Joung-Hoon Kim	0001.1087	1289
49455 7590 07/21/2008 STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005				
EXAMINER SASINOWSKI, ANDREW				
ART UNIT 4163		PAPER NUMBER		
MAIL DATE 07/21/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/553,233

Applicant(s)

KIM, JOUNG-HOON

Examiner

ANDREW J. SASINOWSKI

Art Unit

4163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-20 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 10/14/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/ISD)
Paper No(s)/Mail Date 10/14/2005, 9/4/2007
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 19 is objected to because of the following informalities: it contains the typographical error "signle" when "single" was most likely the intended word.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2 – 3 and 9 - 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 claims "selecting the two successive, empty disc mounting recesses when empty disc mounting recesses are found". It is unclear what "selecting" specifically means in this context.
3. Claim 3 is rejected since it is dependent upon claim 2. Furthermore, claim 3 claims "selecting two successive disc mounting recesses which are not both empty if two successive, empty disc mounting recesses are not found." It is unclear what "selecting" specifically means in this context.
4. Claim 9 recites "selecting the multiple disc mounting recesses". It is unclear what "selecting" specifically means in this context.
5. Claims 10—12 are rejected as they are all dependent upon claim 9.
6. Claim 13 is recites "selecting the two successive disc mounting recesses". It is not known what "selecting" means in this context.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Isobe [US 5,341,352].

Regarding claim 1, Isobe teaches:

- A method of opening a tray of an optical disc changer that includes a plurality of disc mounting recesses, on each of which a disc may be loaded, **[claim 1, fig. 10]**
- The method comprising: moving two disc mounted recesses to an exposure position so that discs can be simultaneously mounted on the recesses when the tray is opened if a tray open command to mount two discs simultaneously is input by a user, **[fig. 10]**
- And opening the tray. **[claim 1]**

Regarding claim 19, Isobe teaches:

- An optical disc changer tray opening method, comprising:
- inputting a tray open command to initiate an opening of a tray of the disc changer, the tray including multiple disc mounting recesses **[col. 3, lines 30-36, see also fig. 1];**

- determining whether the tray open command initiates a multiple disc mounting mode or a single disc mounting mode [**col. 3, lines 30-36 and col. 4, lines 33-38**];
- opening the tray to provide access to the disc mounting recesses; [**col. 3, lines 30-36**]
- exposing multiple disc mounting recesses if the command initiates the multiple disc mounting mode or exposing one multiple disc mounting recess if the tray open command initiates a single disc mounting mode [**col. 3, lines 30-36 and col. 4, lines 33-38. Also see fig. 1 and fig. 10**].

Regarding claim 20, Isobe teaches:

- An optical disc changer tray opening method, comprising:
- inputting a tray open command to initiate an opening of a tray of the disc changer, the tray including multiple disc mounting recesses [**col. 3, lines 30-36, see also fig. 1**];
- determining whether the tray open command initiates a multiple disc mounting mode or a single disc mounting mode [**col. 3, lines 30-36 and col. 4, lines 33-38**];
- opening the tray to expose multiple disc mounting recesses if the command initiates the multiple disc mounting mode or to expose one multiple disc mounting recess if the tray open command initiates a single disc mounting mode. [**col. 3, lines 30-36 and col. 4, lines 33-38. Also see fig. 1**].

Art Unit: 4163

3. Claim 6, 7 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurosu [US RE 37,170].

Regarding claim 6, Kurosu teaches:

- An optical disc changer tray opening method, comprising: inputting a tray open command to initiate an opening of a tray of the disc changer **[col. 15, lines 20-28]**
- the tray including multiple disc mounting recesses **[fig. 3]**;
- determining whether the tray open command initiates a multiple disc mounting mode; **[fig. 3, also note that this device always exposes more than one disc mounting recess when it is opened]**
- opening the tray to expose multiple disc mounting recesses if the command initiates the multiple disc mounting mode. **[fig. 3]**

Regarding claim 7, Kurosu teaches:

- The method according to claim 6 **[see above]**,
- wherein the opening comprises rotating the tray to move the multiple disc mounting recesses to an exposure position **[col. 8, lines 13-16, also see fig. 5]**.

Regarding claim 14, Kurosu teaches:

- The method according to claim 6, wherein the multiple discs include first and second discs and the multiple disc recesses include first and second disc recesses in a roulette that are detected by the optical disc changer **[col. 8, lines 17-21]** and wherein the method further comprises:

- detecting a condition in which the second disc is mounted on the disc mounting recess that is detected earlier during a rotation of the roulette **[col. 8, lines 17-21]**; and
- detecting a condition in which the first disc is mounted on the disc mounting recess that is detected later than the earlier detected recess **[col. 8, lines 17-21]**.

4. Claims 15 through 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim [2004/0013054].

Regarding claim 15, Kim teaches:

- An optical disc changer, comprising: a rotatable roulette having a plurality of disc mounting recesses **[fig. 2]**;
- a detection sensor to recognize the disc mounting recesses and determines whether a disc is mounted on each of them **[abstract]**
- a microprocessor to control the roulette motor according to tray open/close commands inputted by a user **[fig. 2, item 203]**
- wherein when the user inputs a multiple disc mounting command, the microprocessor responsively controls the roulette motor based on information received from the detection sensor so that multiple disc mounting recesses are moved to loading/unloading positions **[fig. 2, item 200, 201, 203.]**

Regarding claim 16, Kim teaches:

- The changer according to claim 15 **[see above]**,

- wherein the detection sensor recognizes the disc mounting recesses that pass by the sensor when the roulette rotates, and determines whether discs are mounted on the corresponding disc mounting recesses **[abstract]**.

Regarding claim 17, Kim teaches:

- The changer according to claim 16 **[see above]**,
- wherein results of the recognition and detection of the detection sensor is provided to the microprocessor. **[0026, note the use of the main controller]**

5. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Ryu [2004/0120226].

Ryu teaches:

- A method of reproducing data on discs in an optical disc changer in which multiple discs are mounted on a roulette wheel of the changer **[fig. 1]**,
- priority is established among the disks **[claim 18, note this is determined by order of disc placement in the disc tray]**,
- and a multiple disc mounting mode has been initiated **[claim 18]**, the method comprising:
- determining whether the discs are mounted on the disc mounting recesses which are selected when the multiple disc mounting mode has been initiated **[claim 18, part a]**;

Art Unit: 4163

- reproducing a first disc having high priority, if discs are mounted on the selected disc mounting recesses **[claim 18]**; and
- automatically reproducing a second high priority disc when the reproduction of the first disc is completed **[fig. 6]**, wherein if one of the two disc mounting recesses does not have a disc mounted thereon then only the mounted disc is reproduced **[0002]**.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isobe in view of Kim.

Regarding claim 2, Isobe teaches:

- The method of claim 1 **[see above]**.

However, Isobe does not teach:

- searching for two successive, empty disc mounting recesses if the tray open command is applied; and
- selecting the two successive, empty disc mounting recesses when empty disc mounting recesses are found.

Kim does teach:

- searching for two successive, empty disc mounting recesses if the tray open command is applied **[abstract, note that Kim's device stores the disc recess occupancy data as a flag in the main controller, and thus still stores information regarding which recess is occupied with a disc even when an open command is inputted]**
- selecting the two successive, empty disc mounting recesses when empty disc mounting recesses are found **[abstract, note that since Kim's device selects empty recess and flags them with vacancy information, it inherently will select the correct recesses in a situation where there are two successive empty disc mounting recesses.].**

In regards to claim 3, Kim also teaches:

- selecting two successive disc mounting recesses which are not both empty if two successive, empty disc mounting recesses are not found. **[abstract, note Kim's device will inherently do this if the condition recited in claim 2 isn't met].**

8. It would have been obvious at the time of invention to one with ordinary skill in the art to combine the selection method taught by Kim with the device taught by Isobe because doing so would provide a predictable result, namely that the main processor in the disc reading device will know if there are two successive empty disc recesses.

7. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu in view of Isobe.

Art Unit: 4163

Regarding claim 4, Ryu teaches:

- a method comprising: determining whether discs are mounted on pre-selected disc mounting recesses **[abstract, note that the method taught by Ryu involves determining the playback time of each disc that is loaded, and this would inherently determine whether or not a disc was loaded on one of the designated recesses, also see fig. 1];**
- reproducing a first disc having higher priority **[claim 18, note that the disc order in the tray determines priority]** when a condition in which discs are mounted on the selected two disc mounting recesses is determined to be in effect **[claim 18, part a];**
- and reproducing a second disc when the reproduction of the first disc is completed. **[claim 18].**

Regarding claim 5 Ryu also teaches:

- wherein if only one of the disc mounting recesses has a disc mounted thereon, the mounted disc only is reproduced **[0002].**

However, Ryu does not teach:

- A method of reproducing data on discs in an optical disc changer which is suitable for a tray open mode that enables two discs to be mounted simultaneously.

Isobe does teach:

- A method of reproducing data on discs in an optical disc changer which is suitable for a tray open mode that enables two discs to be mounted simultaneously **[claim 1, fig. 10]**

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the device taught by Ryu with the disc loading taught by Isobe because doing so would provide a predictable result, namely that several discs could be loaded onto a disc tray with only one disc tray opening command.

8. Claims 8-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Kurosu in view of Kim.

Regarding claim 8, Kurosu teaches:

- The method according to claim 6 **[see above]**,
- A command that initiates the multiple disc mounting mode **[see fig. 3, note that every time that the tray is opened it is inherently a multiple disk mounting mode since three recesses are available for loading]**.

However, Kurosu does not teach:

- searching for multiple consecutive, empty disc mounting recesses.

Kim does teach:

- searching for multiple consecutive, empty disc mounting recesses **[abstract, note that since Kim's device searches each disc recess for the existence of a disc, it will inherently record if there are multiple consecutive empty disc mounting recesses]**

Regarding claim 9, Kim also teaches:

Art Unit: 4163

- when multiple successive, empty disc mounting recesses are found, the method further comprises: selecting the multiple disc mounting recesses **[fig. 3a, item 302a]**;
- recording numbers of the selected disc mounting recesses **[fig. 3a, item 303a]**.

9. It would have been obvious at the time of invention to one with ordinary skill in the art to combine the device taught by Kim with the device taught by Kurosu because doing so would provide a predictable result, namely that the disc reading will have data regarding the presence and location of consecutive empty disc mounting recesses.

10. Regarding claim 10, Kurosu teaches:

- the method further comprising moving the multiple selected disc mounting recesses to a loading position **[fig. 3]**.

11. Regarding claim 11, Kurosu teaches:

- The method wherein the moving comprises rotating a roulette wheel, in which the disc mounting recesses are defined **[fig. 3, also col. 7, lines 30-34]**,
- so that a center between the multiple selected disc mounting recesses is located at a center portion of an area to be exposed **[figs. 3 the center portion between the two side recesses is at a center portion of an exposed area and 5]**.

Regarding claim 12, Kurosu also teaches:

Art Unit: 4163

- The method further comprising: detecting numbers of the disc mounting recesses during the rotating of the roulette **[col. 8, lines 17-21]**;
- determining an amount of rotation that has occurred based on the detection of the numbers of the disc mounting recesses **[col. 8, lines 17-21]**.

Regarding claim 13, Kurosu teaches:

- The method according to claim 6 **[see above]**

However, Kurosu does not teach:

- The method wherein if successive and empty disc mounting recesses are not found, but two successive disc mounting recesses are found, the method further comprises:
- selecting the two successive disc mounting recesses; and
- recording numbers of the recesses.

Kim does teach:

- The method wherein if successive and empty disc mounting recesses are not found, but two successive disc mounting recesses are found, the method further comprises:
- selecting the two successive disc mounting recesses; **[fig. 3a, items 302a or 304a]**
- recording numbers of the recesses **[fig. 3a, items 304a or 303a]**.

It would have been obvious at the time of invention to one with ordinary skill in the art to combine the device taught by Kim with the device taught by Kurosu because

Art Unit: 4163

doing so would provide a predictable result, namely that the disc reading device will have a default action if there are not two successive empty disc recesses found on the tray.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Isshiki et. al. [US 5,218,592] teaches a device that always selects two adjacent disc recesses when opened, regardless of whether the recesses are vacant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW J. SASINOWSKI whose telephone number is (571)270-5883. The examiner can normally be reached on Monday to Friday, 7:30 to 5:00, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Robinson can be reached on (571)272-2319. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4163

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJS

/Mark A. Robinson/

Supervisory Patent Examiner, Art Unit 4163